CLAIMS

What is claimed is:

1.   A storage system storing block groups including plural storing object blocks in plural storage devices dispersedly,

one of said storing object blocks being a redundancy block which is redundancy data used if any of the plural other storing object blocks is defective, to rebuild this storing object block, the storage system comprising:

plural storage devices;

a block writer storing each of the plural storing object blocks and a copied block copied from any of plural storing object blocks in different storage devices;

a block rebuilder operating if a defect is detected in any of said uncopied storing object blocks, to rebuild said defective storing object block based on said plural storing object blocks other than said defective storing object block; and

a rebuild block overwriter overwriting the rebuilt storing object block on the copied block or on the storing object block which is an original of the copied block.

2.   The storage system according to claim 1, wherein for each of said plural block groups, said block writer stores each of said plural storing object blocks included in the block group and said copied block in said different storage devices,

wherein if one of said storage devices is defective, then for each of said block groups in which an uncopied storing object block is stored in said storage device, said block rebuilder rebuilds said defective storing object block based on said plural storing object blocks other than said storing object blocks stored in said storage device, and

wherein for each of said block groups in which an uncopied storing object block is stored in said storage device, said rebuild block overwriter overwrites said rebuilt storing object block on said copied block or said storing object block which is an original of said copied block.

3.   The storage system according to claim 1, wherein said block writer stores each of said plural storing object blocks and said copied block copied from said redundancy block included in said plural storing object blocks, in said different storage devices.

4.   The storage system according to claim 3, further comprising:

a request receiver receiving a write request for a write of write data to data blocks that are said plural storing object blocks other than said redundancy block; and

a redundancy block generator generating a new redundancy block based on said data block to which

the write data is to be written, said write data, and said original redundancy block, and

wherein said block writer writes said write data to said data block to which the write data is to be written and writes said new redundancy block to said original redundancy block and said copied block.

5. The storage system according to claim 1, wherein said block writer stores each of said plural storing object blocks and said copied block copied from any of plural data blocks that are said plural storing object blocks other than said redundancy block, in said different storage devices.

6. The storage system according to claim 5, further comprising:

a request receiver receiving a write request for a write of write data to data blocks that are said plural storing object blocks other than said redundancy block, and

wherein if said data block to which the write data is to be written is said original block, said block writer writes said write data to each of said original block and said copied block, and if said data block to which the write data is to be written is not said original block, said block writer writes said write data to said data block to which the write data is to be written.

7. A controller for a storage system storing block groups including plural storing object blocks in plural storage devices dispersedly,

one of said storing object blocks being a redundancy block which is redundancy data used if any of the plural other storing object blocks is defective, to rebuild this storing object block, the controller comprising:

a block writer storing each of the plural storing object blocks and a copied block copied from any of plural storing object blocks in different storage devices;

a block rebuilder operating if a defect is detected in any of said uncopied storing object blocks, to rebuild said defective storing object block based on said plural storing object blocks other than said defective storing object block; and

a rebuild block overwriter overwriting the rebuilt storing object block on the copied block or on the storing object block which is an original of the copied block.

8. A method for controlling a storage system storing block groups including plural storing object blocks in plural storage devices dispersedly,

one of said storing object blocks being a redundancy block which is redundancy data used if any of the plural other storing object blocks is defective, to rebuild this storing object block, the method comprising the steps of:

a block writing step of storing each of the plural storing object blocks and a copied block copied from any of plural storing object blocks in different storage devices;

a block rebuilding step of operating if a defect is detected in any of said uncopied storing object blocks, to rebuild said defective storing object block based on said plural storing object blocks other than said defective storing object block; and

a rebuild block overwriting step of overwriting the rebuilt storing object block on the copied block or on the storing object block which is an original of the copied block.

9. A program for controlling a storage system storing block groups including plural storing object blocks in plural storage devices dispersedly,

one of said storing object blocks being a redundancy block which is redundancy data used if any of the plural other storing object blocks is defective, to rebuild this storing object block, the program allowing said storage system to function as:

a block writer storing each of the plural storing object blocks and a copied block copied from any of plural storing object blocks in different storage devices;

a block rebuilder operating if a defect is detected in any of said uncopied storing object blocks, to rebuild said defective storing object block based on said plural storing object blocks other than said defective storing object block; and

a rebuild block overwriter overwriting the rebuilt storing object block on the copied block or on the storing object block which is an original of the copied block.

10.   A storage medium in which the program according to claim 9 is stored.